

THIRD FLOOR - COURT AND OFFICE BUILDING 40 CULPEPER STREET

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COUNTY ENGINEER COUNTY SOIL SCIENTIST (540) 347-8660

DATE:

October 2, 2001

TO:

Elizabeth A. Cook, Chief of Planning

FROM:

Danny Hatch, County Soil Scientist

SUBJECT:

Warrenton North, LLC (PP01-C-08)

A preliminary soil map (1' = 100') was conducted on this parcel by J. Earl Frazier CPSS dated September 14, 2001.

The information submitted will satisfy the required soil information as stated in the County Subdivision Ordinance.

The County Soil Scientist Office was requested to conduct a Type I Soil Map in May 2001. This report was completed on May 29, 2001 and given to Mr. Brian Ray of William H. Gordon Assoc. who was the agent for Warrenton North LLC at that time. Being very familiar with this parcel, there are several discrepancies between the Preliminary Soil Map and the Type I Soil Map. Most noticeable is the absents of a quarry on the Preliminary Soil Map which is located on proposed lot 9.

Recommendations are noted first due to importance, with details following. Recommendations 1-4 should be forwarded to the Planning Commission in the staff report as conditions of approval prior to final plat acceptance.

Recommendation

A Virginia Certified Professional Soil Scientist (CPSS) needs to adjust the preliminary soil map
lines onto the final drainfield plat. This needs to be done in the field and checked for any
additional soil information to be added to the final scale plat map. I would highly recommend
that an agent of Frazier Consultants met with me in the field so that these differences can be
addressed in a timely and efficient manner. This needs to be done before any proposed road or lot
configuration is changed.

A signature block shall be placed on this plat for the CPSS to sign which states:

Preliminary Soils Information Provided by J. Earl Frazier, CPSS (1"=100").	
This Virginia Certified Professional Soil Scientist has field reviewed and adjusted the preliminary soil information onto the final plat (1"=') and certifies that this is the Best Available Soils Information to Date for Lots	
Va. Certified Professional Soil Scientist CPSS #3401	DATE

- Interpretive information from the County Interpretive Guide for each mapping unit shown on the above plat shall be placed on the same soil map. Also a Symbols Legend shall be placed on the plat map to identify spot symbols.
- The four statements under <u>Home Sites and Road Construction</u> shall be placed on the same plat map.
- This plat will be filed in the front office of Community Development and used exclusively for obtaining soils information for this proposed subdivision.
- This map needs to be submitted to the Soil Scientist Office before final plat approval is made.

Home Sites and Road Construction

- Staff has several concerns about the steep slopes, shallow soils, and drainageways the proposed Rolling Fields Lane is cutting across. Also the placement of the cull-d-sac in a natural drain may disrupt the flow of water after major rain events.
- With the best soil information that is available at present, several lots, raise concern for the placement of a drainfield and house site. They are:
 - Lots 1 and 2 (possible shrink swell soil 48B)
 - Lot 7 (shallow to bedrock soils and steep slopes 240D and 140D)
 - Lot 8 (shallow to bedrock soils-140D & 240D, large drainageway)
 - Lot 9 (quarry and drainageway)
 - Lot 15 (drainageway and limited area)
 - Lot 18 (pond site, drainageways, shallow to bedrock soil-33C)
- Due to limited area, soil and site conditions on these proposed lots, the Planning Commission needs to know the number of alternative on-site wastewater system that are being proposed.
 Regular operation and maintenance of these systems may be requested as a requirement for approval.

4. Due to landscape position (drainageways) and high seasonal water tables, the following statement needs to be placed on the final drainfield plat to be placed in the front office of Community Development: "The County recommends that no below grade basements be constructed on soil mapping units 15B, 17B & C due to wetness and landscape position unless the foundation drainage system of the structure is designed by a Virginia Licensed Professional Engineer".

The foundation drainlines should be daylight for gravity flow on all structures. This soils information will need to be provided by the applicant to the Building Department at the time of application.

- 5. The soils where the drainfields are proposed are definitely the best soils on the property for subsurface sewage disposal systems. The following statement needs to be put on the final drainfield plat: "Before a home is started the builder shall mark the drainfield area off and not disturb it during construction".
- 6. Soil mapping units 140C & D, 240D, 241C, and 340D can be shallow to hard bedrock. The following statement needs to be placed on the final drainfield plat "The County recommends that before road or home construction begin in map units 140C & D, 240D, 241C, and 340D, a site specific evaluation be conducted so that shallow to bedrock areas are identified. These areas may require blasting if deep cut or excavation is done"
- 7. There are some areas of Shrink-Swell soils on this property, mainly in mapping unit 48B. The following statement needs to be placed on the final drainfield plat: "Structures placed on mapping unit 48B will require a geotechnical study and the foundation will have be designed by a Virginia Licensed Professional Engineer in accordance with the Uniform Statewide Building Code".

This soils information will need to be provided by the applicant to the Building Department at the time of application.

Wetlands/ Open Space

There are little to no hydric soils (wetlands) on this property. The area of 12A (Rohrersville loam) may have small inclusions of hydric soils. This area needs to be kept in its natural state.

The area around the pond and quarry would be a good location for the required 25% open space. Due to steep slopes (erosive areas), drainageways, and possible wetlands, these areas should have minimal disturbance. This would effect lot 7, 9, and 18.